DEQ	OFFICE OF DRINKING WATER AND MUNICIPAL ASSISTANCE POLICY AND PROCEDURE		DEPARTMENT OF ENVIRONMENTAL QUALITY
Original Effective Date: December 27, 2000 **Revised Date:** April 3, 2013 **Reformatted Date:**	**Subject:** Grouting of Community Water Supply Wells		**Category:** ☐ Internal/Administrative ☐ External/Noninterpretive ☒ External/Interpretive
	Division/Office and Program Names: ODWMA - Public Water Supply Program		
	Number: ODWMA-399-016	Page: 1 of 4	

A Department of Environmental Quality (DEQ) Policy and Procedure cannot establish regulatory requirements for parties outside of the DEQ. This document provides direction to DEQ staff regarding the implementation of rules and laws administered by the DEQ. It is merely explanatory; does not affect the rights of, or procedures and practices available to, the public; and does not have the force and effect of law.

INTRODUCTION, PURPOSE, ISSUE:

Grouting water supply wells is necessary to obtain a tight bond between the well casing and the undisturbed natural earth formations, thus preventing the entrance of any surface water or near surface contaminants to the groundwater source, and to protect the well casing from corrosion.

This policy and procedure outlines the approved grouting methods for large capacity water supply wells and test wells associated with community water supplies (CWSs). Proposals for alternative methods of grouting should be reviewed on a case-by-case basis amongst district staff and water well construction program staff.

This policy and procedure replaces Drinking Water and Radiological Protection Division policy DWRP-03-016, Grouting of Community Water Supply Wells, dated December 27, 2000. The policy and procedure was revised to address the change in definition of a large quantity withdrawal from 100 gallons per minute to 70 gallons per minute to provide consistency with the current large quantity water withdrawal requirements.

AUTHORITY:

Rule 822 (R 325.10822) and Rule 832 (R 325.10832) of Part 8 of the administrative rules promulgated pursuant to Section 5, MCL 325.1005, Safe Drinking Water Act, 1976 PA 399, as amended (Act 399).

The Groundwater Quality Control Rules, promulgated pursuant to Section 12714 of Part 127, Water Supply and Sewer Systems, of the Public Health Code, 1978 PA 368, as amended (Act 368).

STAKEHOLDER INVOLVEMENT:

Input on this policy and procedure was solicited from the Michigan Well Driller Advisory Board in December 2000. The policy and procedure was modified based upon recommendations while conforming to the intent of Act 399 in preventing the entrance of any surface water or near surface contaminant to the groundwater.

DEFINITIONS:

"Bentonite Grout" means a slurry that consists of bentonite and water and has a high solids concentration and a minimum density that meets specifications approved by the department.

"Community Water Supply" means a public water supply that provides year-round service to not fewer than 15 living units or which regularly provides year-round service to not fewer than 25 residents. Examples include municipalities, such as cities, villages, and townships; apartment complexes; manufactured housing communities; condominiums; and nursing homes.

"Concrete Grout" means a mixture of cement, sand, and water in the proportion of one bag of cement (94 pounds), an equal volume (1 cubic foot) of dry sand or gravel aggregate, and not more than 6 gallons of clean water.

"Grout" means neat cement, concrete, or other sealing material approved by the department to obtain a tight bond between a well casing and the natural earth formations.

"Neat Cement" means a mixture of one bag of Portland cement (94 pounds) and not more than 6 gallons of clean water. A neat cement admixture prepared in the proportion as described shall weigh not less than 15 pounds per gallon. Drilling fluid bentonite that is not more than 5 percent by weight of cement and additional water that is not more than 0.6 gallons for each 1 percent of bentonite may be added to neat cement.

"Production Well" means a well that is to be approved for use as a water supply well to serve a community water supply and has been constructed in accordance with the provisions of Part 8 of the administrative rules adopted under Act 399.

"State Well Construction Code" (Code) – The administrative rules and construction code promulgated pursuant to Section 12714 of Act 368, being R 325.1601 through R 325.1722 of the Michigan Administrative Code.

"Test Well" means a well that is used to obtain information on groundwater quantity, quality, or aquifer characteristics for the purpose of designing or operating a production well (i.e., observation well).

POLICY:

The following criteria apply to production wells and test wells that are located within the approved standard isolation area surrounding a production well or wells:

1. New production wells or test wells shall be grouted with neat cement or concrete grout pursuant to the provisions of the Code.

2. The District Engineer may allow the use of bentonite grouts on production wells and test wells where the pumping rate of the permanent pump installed in the production well is to be less than 70 gallons per minute.

3. Production wells or test wells that are flowing (artesian), or that discharge subterranean gases, shall be grouted with neat cement or concrete grout.

4. The District Engineer may allow the use of grout containing low heat-of-hydration cement (ASTM Type IV) for grouting production wells or test wells constructed with PVC plastic well casing.

5. Requests to use cement grout additives or admixtures other than that specified in the Code or this policy and procedure shall be submitted for review to the District Engineer and shall be approved before use.

6. All production wells and test wells shall be grouted pursuant to the provisions of the Code and this policy and procedure. Test wells that are not grouted pursuant to the provisions of this policy and procedure will not be approved by the District Engineer for conversion to a production well and shall be plugged in accordance with the abandoned well plugging provisions of the Code.

7. A test well shall not be converted to a production well if there are test wells located within the standard isolation area surrounding the proposed production well that have not been grouted pursuant to the provisions of this policy, until those test wells have been properly sealed.

8. Deviations or alternate proposals will be considered on a case-by-case basis. Proposals should be evaluated by the district engineer in consultation with water well construction program staff.

PROCEDURES:

WHO	DOES WHAT
DEQ District Engineer	Incorporates this policy and procedure as part of the permit to construct a production well and uses this policy and procedure to evaluate proposals from consulting engineers, developers, and water well drilling contractors.
DEQ District Engineer	Plans, specifications, and/or permit applications that are inadequate or contain criteria in conflict with the specifications contained herein will be evaluated on a case-by-case basis.

DISCLAIMER:

Compliance with Part 127 shall be based on the statute and rules promulgated under Part 127. Nothing in this policy and procedure shall be used in an enforcement action brought against a Registered Water Well Drilling Contractor or Pump Installer. This policy and procedure shall expire on December 31, 2014, unless superseded before that date.

OFFICE CHIEF APPROVAL:

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3/15/2013
Date

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4/3/2013
Date